

## Abstract of the Disclosure

An integrated biosensor system for the simultaneously detection of a plurality of different types of targets includes at least one sampling platform, the sampling platform including a plurality of receptors for binding to the targets. The plurality of receptors include at least one protein receptor and at least one nucleic acid receptor. At least one excitation source of electromagnetic radiation at a first frequency is provided for irradiating the receptors, wherein electromagnetic radiation at a second frequency different from the first frequency is emitted in response to irradiating when at least one of the different types of targets are bound to the receptor probes. An integrated circuit detector system having a plurality of detection channels is also provided for detecting electromagnetic radiation at said second frequency, the detection channels each including at least one detector.